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EXAMINER
MOORE JR, MICHAEL J

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/748,427	BURROUGHS ET AL.
	Examiner	**Art Unit**	
	Michael J. Moore, Jr.	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6,8,9,11,16,18,19,21-24,26,27,31,32,34,35,38,40,41 and 43-45* is/are rejected.

7)☒ Claim(s) *2-5,7,10,12-15,17,20,25,28-30,33,36,37,39 and 42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *2/8/2002*.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement filed 2/8/2002 fails to comply with 37 CFR

1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each

publication or that portion which caused it to be listed; and all other information or that

portion which caused it to be listed. It has been placed in the application file, but the

information referred to therein has not been considered. It also appears that the

document number provided for listed reference "AA" on Form PTO-1449 is incorrect.

Specification

2.   The disclosure is objected to because of the following informalities: On page 8,

line 33, the word "download" should be "downloaded". On page 9, line 2, the word "the"

before "transmitted" should be "then". On page 10, line 8, the word "does" is not

needed. On page 10, line 29, the word "does" is not needed. On page 10, line 35, part

of the sentence appears to be missing after the phrase "may be coupled to". Lastly, it

appears that text appears on page 11, line 12 – page 12, line 19 that is duplicate to text

on page 10, line 3 – page 11, line 11. Appropriate correction is required.

Claim Objections

3.   Claims **2-8, 10, 12-18, 20-25, 28-34, 36-40, 42, 43, and 45** are objected to

because of the following informalities:

Regarding claims **2-8,** the word "invention" on line 1 of all of these claims should

be replaced with "method".

Regarding claim **8,** on line 2, the word "to" after the word "after" is not needed.

Regarding claim **10**, the word "invention" on line 1 should be replaced with "cable modem".

Regarding claims **12-18**, the word "invention" on line 1 of all of these claims should be replaced with "cable modem".

Regarding claim **18**, on line 2, the word "to" after the word "after" is not needed.

Regarding claims **20-25**, the word "invention" on line 1 of all of these claims should be replaced with "cable modem".

Regarding claim **22**, on line 3, the word "one" is missing between words "least" and "parameter".

Regarding claim **23**, on line 5, the word "the" is missing between words "that" and "primary".

Regarding claim **24**, on line 4, the word "to" is missing between words "response" and "a".

Regarding claim **25**, on line 6, the word "to" is missing between words "response" and "a".

Regarding claims **28-34**, the word "invention" on line 1 of all of these claims should be replaced with "first CMTS".

Regarding claims **36-40**, the word "invention" on line 1 of all of these claims should be replaced with "method".

Regarding claims **42 and 43**, the word "invention" on line 1 of all of these claims should be replaced with "first CMTS".

Regarding claim **43**, on line 2, the word "receive" should be "receives".

Regarding claim **45**, on line 5, the word "receive" is not needed.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims **1, 6, 8, 9, 11, 16, 18, 19, 21-24, 26, 27, 31, 32, 34, 35, 38, 40, 41, and**

43-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Missett (U.S.

6,621,789). The Missett reference teaches all of the limitations of the listed claims with

the reasoning that follows.

Regarding claim **1**, "storing an indication of an alternative downstream channel"

is anticipated by the secondary frequencies (indication of alternate downstream

channel) provisioned to coax units spoken of in column 18, lines 24-32. "Detecting that

the primary downstream channel has become invalid" is anticipated by the detected

hardware failure spoken of in column 18, lines 16-23. Lastly, "switching to employ the

alternative downstream channel in lieu of the primary downstream channel whereby

reinitialization of the cable modem is not required" is anticipated by the automatic

switching of coax units to their secondary frequencies spoken of in column 18, lines 16-

23.

Regarding claims **6 and 16**, storing at least one parameter established during initialization of the primary downstream channel with a first CMTS and transmitting the parameter by the cable modem to a second CMTS on the alternative downstream channel is anticipated by the secondary frequencies (parameter for cable modem service) provisioned to coax units (CTUs), which are distributed (stored) over the headend modems as spoken of in column 18, lines 24-32.

Regarding claims **8 and 18**, wherein the at least one parameter is transmitted by the cable modem to the second CMTS after detecting in the detecting step that the primary downstream channel has become invalid is anticipated by the secondary frequencies (parameter for cable modem service) provisioned to coax units (CTUs), which are distributed (stored) over the headend modems in the event of a failure as spoken of in column 18, lines 24-32.

Regarding claim **9**, "a memory for storing an indication of an alternative downstream channel" is anticipated by the secondary frequencies (indication of alternate downstream channel) provisioned to coax units (CTUs) spoken of in column 18, lines 24-32. "A tunable receiver" is anticipated by transceiver 49 of the modem shown in Figure 2. "A processor for detecting that the primary downstream channel has become invalid" is anticipated by the detected hardware failure spoken of in column 18, lines 16-23. Lastly, "instructing the tuner to tune to the alternative downstream channel in lieu of the primary downstream channel whereby reinitialization of the cable modem is not required" is anticipated by the automatic switching of coax units to their secondary frequencies spoken of in column 18, lines 16-23.

Regarding claim **11**, "means for storing an indication of an alternative

downstream channel" is anticipated by the secondary frequencies (indication of

alternate downstream channel) provisioned to coax units (CTUs) spoken of in column

18, lines 24-32. "Means for detecting that the primary downstream channel has become

invalid" is anticipated by the detected hardware failure spoken of in column 18, lines 16-

23. Lastly, "means for switching to employ the alternative downstream channel in lieu of

the primary downstream channel whereby reinitialization of the cable modem is not

required" is anticipated by the automatic switching of coax units to their secondary

frequencies spoken of in column 18, lines 16-23.

Regarding claim **19**, "a first memory location storing an indication of a first

channel to be used by the cable modem as its primary downstream channel" is

anticipated by modem 48 of Figure 2 that receives frequency information (indication of

first channel) within a Media Access Link (MAL) as spoken of in column 9, lines 19-34.

Lastly, "a second memory location storing an indication of a second channel to be used

by the cable modem as its alternative channel" is anticipated by the secondary

frequencies (indication of alternate downstream channel) provisioned to coax units

(CTUs) spoken of in column 18, lines 24-32.

Regarding claim **21**, "a third memory location storing at least one parameter

determined during an initialization process of the cable modem in conjunction with a

CMTS supplying the primary downstream channel" is anticipated by the secondary

frequencies (parameter for cable modem service) provisioned to coax units (CTUs),

which are distributed (stored) over the headend modems as spoken of in column 18,

lines 24-32.

Regarding claim **22**, "a transmitter for transmitting the at least one parameter to a

second CMTS supplying the alternative downstream channel" is anticipated by

transceiver 49 within modem 48 of Figure 2 as well as the secondary frequencies which

are distributed over the headend modems as spoken of in column 18, lines 24-32.

Regarding claim **23**, "a detector that determines that the primary downstream

channel is invalid" is anticipated by the detected hardware failure spoken of in column

18, lines 16-23. "A frequency adjustable receiver tuner that changes from the first

channel to the second channel when the detector determines that the primary

downstream channel is invalid" is anticipated by transceiver 49 within modem 48 of

Figure 2 as well as the automatic switching of coax units to their secondary frequencies

spoken of in column 18, lines 16-23.

Regarding claim **24**, "a frequency adjustable transmitter tuner that tunes to a new

upstream channel in response to a received upstream channel message" is anticipated

by transceiver 49 within modem 48 of Figure 2 as well as the modem tuning to a

provisioned RX frequency (upstream channel) spoken of in column 15, lines 56-65.

Regarding claim **26**, "A cable modem system comprising at least one cable

modem and a plurality of cable modem terminating systems" is anticipated by the

system shown in Figure 1 that contains coax units 16 (cable modems) and coax

interface unit 14 that contains a plurality of coax headend units 208 (cable terminating

systems) shown in Figure 3. Lastly, "when detection of a failure of at least one of the

cable modem terminating systems is made by the cable modem, then the cable modem

begins communicating with another of the cable modem terminating systems, whereby

a reinitialization of the cable modem is not required" is anticipated by the moving of

coax units from one coax headend unit (CLUH) to another upon a failure spoken of in

column 18, lines 48-51.

Regarding claim **27**, "means for receiving as an input at least one parameter for

cable modem service provided between a cable modem and a second CMTS which is

initially serving the cable modem, the one parameter being established during

initialization of the cable modem service between the cable modem and the second

CMTS" is anticipated by the secondary frequencies (parameter for cable modem

service) provisioned to coax units (CTUs), which are distributed over the headend

modems as spoken of in column 18, lines 24-32. Lastly, "means for establishing cable

modem service between the first CMTS and the cable modem using the at least one

parameter" is anticipated by the automatic switching of coax units to their secondary

frequencies and a protection CLUH spoken of in column 18, lines 16-23.

Regarding claim **31**, "wherein the at least one parameter is supplied from the

cable modem" is anticipated by the secondary frequencies (parameter for cable modem

service) provisioned to coax units (CTUs), which are distributed (stored) over the

headend modems as spoken of in column 18, lines 24-32.

Regarding claims **32 and 38**, "wherein the at least one parameter is supplied

after failure of the second CMTS" is anticipated by the secondary frequencies

(parameter for cable modem service) provisioned to coax units (CTUs), which are

distributed (stored) over the headend modems in the event of a failure as spoken of in column 18, lines 24-32.

Regarding claims **34 and 40**, "wherein the at least one parameter is supplied over a channel different than the channel by which the cable modem was communicating with the CMTS" is anticipated by the secondary frequencies (parameter for cable modem service) provisioned to coax units (CTUs), which are distributed (stored) over the headend modems as spoken of in column 18, lines 24-32.

Regarding claim **35**, "receiving as an input at least one parameter for cable modem service provided between a cable modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by the secondary frequencies (parameter for cable modem service) provisioned to coax units (CTUs), which are distributed (stored) over the headend modems as spoken of in column 18, lines 24-32. Lastly, "establishing cable modem service between the first CMTS and the cable modem using the at least one parameter" is anticipated by the automatic switching of coax units to their secondary frequencies and a protection CLUH spoken of in column 18, lines 16-23.

Regarding claim **41**, "a memory for storing at least one parameter received by the cable modem as an input for cable modem service provided between a cable modem and a second CMTS which is initially serving the cable modem, the at least one parameter being established during initialization of the cable modem service between the cable modem and the second CMTS" is anticipated by the secondary frequencies

(parameter for cable modem service) provisioned to coax units (CTUs), which are

distributed (stored) over the headend modems as spoken of in column 18, lines 24-32.

Lastly, "a processor for operating the first CMTS to establish cable modem service

between the first CMTS and the cable modem using the at least one parameter" is

anticipated by the automatic switching of coax units to their secondary frequencies and

a protection CLUH spoken of in column 18, lines 16-23.

Regarding claim **43**, "a receiver which receives the at least one parameter which

is supplied from the cable modem" is anticipated by coax line unit headend units

(CLUH) 208 that receive provisioned secondary frequencies from the coax units

(modems).

Regarding claim **44**, "receive at least one parameter for cable modem service

provided between a cable modem and a second CMTS which is initially serving the

cable modem, the at least one parameter being established during initialization of the

cable modem service between the cable modem and the second CMTS" is anticipated

by the secondary frequencies (parameter for cable modem service) provisioned to coax

units (CTUs), which are distributed (stored) over the headend modems as spoken of in

column 18, lines 24-32. Lastly, "establish cable modem service between the first CMTS

and the cable modem using the at least one parameter" is anticipated by the automatic

switching of coax units to their secondary frequencies and a protection CLUH spoken of

in column 18, lines 16-23.

Regarding claim **45**, "perform an initialization with a cable modem which is being

served by a second CMTS so as to store for future use at least one parameter for cable

modem service in the event a primary downstream channel provided by the first CMTS

for the cable modem becomes invalid" is anticipated by the secondary frequencies

(parameter for cable modem service) provisioned to coax units (CTUs), which are

distributed (stored) over the headend modems as spoken of in column 18, lines 24-32.

Lastly, "establish cable modem service between the first CMTS and the cable modem

using the at least one parameter after the primary downstream channel provided by the

first CMTS for the cable modem becomes invalid" is anticipated by the automatic

switching of coax units to their secondary frequencies and a protection CLUH spoken of

in column 18, lines 16-23.

Allowable Subject Matter

6.   Claims **2-5, 7, 10, 12-15, 17, 20, 25, 28-30, 33, 36, 37, 39, and 42** are objected

to as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening

claims.

7.   The following is a statement of reasons for the indication of allowable subject

matter:

Regarding claim **2**, the prior art of record teaches the method of claim **1**. The

prior art of record fails to teach receiving an upstream channel descriptor via the

alternate downstream channel and switching to a frequency and modulation scheme

indicated by this descriptor.

Regarding claim **3**, the prior art of record teaches the method of claim **1**. The

prior art of record fails to teach storing an upstream channel identifier prior to the

detecting step, receiving an upstream channel descriptor via an alternative downstream

channel, and then switching to an upstream frequency and modulation scheme

indicated as a function of the identifier and descriptor.

Regarding claim **4**, the prior art of record teaches the method of claim **1**. The

prior art of record fails to teach the cable modem using the IP address, transmit power

level, and configuration file used for the primary downstream channel when initially

communicating via the alternate downstream channel.

Regarding claim **5**, the prior art of record teaches the method of claim **1**. The

prior art of record fails to teach the cable modem ranging and registering with a CMTS

supplying the alternate channel prior to performing the detecting and switching steps.

Regarding claim **7**, the prior art of record teaches the method of claim **6**. The

prior art of record fails to teach transmitting the parameter by the cable modem to the

second CMTS prior to detecting an invalid downstream channel.

Regarding claim **10**, the prior art of record teaches the cable modem of claim **10**.

The prior art of record also teaches a tunable transmitter. The prior art of record fails to

teach the storing of an upstream channel descriptor and the use of a frequency and

modulation scheme indicated by the descriptor after detection of an invalid primary

downstream channel.

Regarding claim **12**, the prior art of record teaches the cable modem of claim **11**.

The prior art of record fails to teach means for receiving an upstream channel descriptor

via the alternate downstream channel and then switching to use an upstream frequency

and modulation scheme indicated by the descriptor.

Regarding claim **13**, the prior art of record teaches the cable modem of claim **11**. The prior art of record fails to teach means for storing an upstream channel identifier prior to the detecting step, means for receiving an upstream channel descriptor via the alternate downstream channel, and means for switching to use an upstream frequency and modulation scheme indicated as a function of the identifier and descriptor.

Regarding claim **14**, the prior art of record teaches the cable modem of claim **11**. The prior art of record fails to teach the cable modem using the IP address, transmit power level, and configuration file used for the primary downstream channel when initially communicating via the alternate downstream channel.

Regarding claim **15**, the prior art of record teaches the cable modem of claim **11**. The prior art of record fails to teach the cable modem ranging and registering with a CMTS supplying the alternate channel prior to performing the detecting and switching steps.

Regarding claim **17**, the prior art of record teaches the cable modem of claim **16**. The prior art of record fails to teach transmitting the parameter by the cable modem to the second CMTS prior to detecting an invalid downstream channel.

Regarding claim **20**, the prior art of record teaches the cable modem of claim **19**. The prior art of record also teaches a third memory location storing at least one parameter determined during an initialization process of the cable modem in conjunction with a CMTS supplying the alternate downstream channel. The prior art of record fails to teach the initialization process being performed prior to the primary downstream channel becoming invalid.

Regarding claim **25**, the prior art of record teaches the cable modem of claim **23**. The prior art of record fails to teach a third memory location that stores an upstream channel identifier received via the primary downstream channel and a frequency adjustable transmitter tuner that tunes to a new upstream channel in response to a received upstream channel message as a function of the stored identifier.

Regarding claim **28**, the prior art of record teaches the CMTS of claim **27**. The prior art of record fails to teach the parameter being one from the group consisting of: a configuration file, a security association, DOCSIS version, concatenation support, payload header suppression, and multicasting support.

Regarding claim **29**, the prior art of record teaches the CMTS of claim **27**. The prior art of record fails to teach where the parameter is supplied from the second CMTS.

Regarding claim **30**, this claim is further limiting to claim **29** and is also allowable over the prior art of record.

Regarding claim **33**, the prior art of record teaches the CMTS of claim **27**. The prior art of record fails to teach where the parameter is supplied prior to failure of the second CMTS.

Regarding claim **36**, the prior art of record teaches the method of claim **35**. The prior art of record fails to teach the parameter being one from the group consisting of: a configuration file, a security association, DOCSIS version, concatenation support, payload header suppression, and multicasting support.

Regarding claim **37**, the prior art of record teaches the method of claim **35**. The prior art of record fails to teach where the parameter is supplied from the second CMTS.

Regarding claim **39**, the prior art of record teaches the method of claim **35**. The prior art of record fails to teach where the parameter is supplied prior to failure of the second CMTS.

Regarding claim **42**, the prior art of record teaches the CMTS of claim **41**. The prior art of record fails to teach an input port to receive the parameter supplied via the second CMTS.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Merrill et al. (U.S. 6,618,353), Cloonan et al. (US 2002/0066110), Fijolek et al. (U.S. 6,510,162), Vogel (U.S. 6,742,187), Miner et al. (U.S. 6,690,655), Nikolich (US 2002/0073431), and Smyth et al. (U.S. 6,598,229) are all references that contain material pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM

FRANK DUONG
PRIMARY EXAMINER